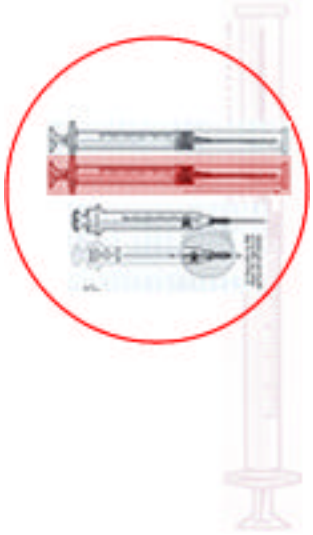
NIOSH recommends that health care facilities use safer medical devices to protect workers from needlestick and other sharps injuries. Since the passage of the Needlestick Safety and Prevention Act in 2000 and the subsequent revision of the OSHA Bloodborne Pathogen Standard, all health care facilities are required to use safer medical devices.

SAFER MEDICAL DEVICE IMPLEMENTATION IN HEALTH CARE FACILITIES

SHARING LESSONS LEARNED

NIOSH has asked a small number of health care facilities to share their experiences on how they implemented safer medical devices in their settings. These facilities have agreed to describe how each step was accomplished, and also to discuss the barriers they encountered and how they were resolved, and most importantly, lessons learned.



This agency is the largest Community Mental Health/Retardation Center in the United States. The agency provides an array of services for eligible residents of this County in the form of mental health/mental retardation services, early childhood intervention services, crises stabilization, psychiatric emergency services, forensic psychiatry, residential programs, psychiatric rehabilitation services and community outreach. Services for adults, adolescents and children are provided in outpatient clinics, inpatient/residential programs and group homes and in natural environments within the community. Approximately 30,000 consumers are served annually within the various programs and services of this agency.

Phase 3-Identify and Screen Safer Medical Devices

Step 1: Identifying the Manufacturers and Their Products

In Phase 2 of this study our Sharps Injury Prevention Team (SIPT) identified the devices our agency nurses use most in the course of their duties. Our focus during the study will be on reviewing and examining the following safer medical devices:

- Phlebotomy needles, especially safer butterfly blood collection sets;
- Vacutainer holders; and
- Safety syringes.

To identify the manufactures of these safer medical devices we searched the Internet sites for manufacturer lists and then browsed the sites of those vendors we wanted to evaluate. The Project Coordinator and our Infection Control Professional obtained vendor information while at conferences. This information was reviewed and the vendors were contacted for complimentary samples and films about their products. One vendor attended two of our SIPT meetings and brought several of his competitors' safer medical devices that are available on the market for our comparison, demonstration and evaluation. SIPT team members were given the opportunity to evaluate these devices. A catalogue search was done on the available safer medical devices our contract medical supplier carries and several were ordered for our SIPT team to evaluate for possible use in the units.

Step 2-Examining the Devices to Ensure Appropriateness to Setting

The SIPT members determined that due to the large numbers of injections and blood samples our nurses perform monthly, focusing on safer devices for these activities would best meet the goal of preventing needlestick injuries in our agency. We reviewed the National Institute for Occupational Safety and Health (NIOSH) recommendations to employers to prevent needlestick injuries in health care settings.

The desirable characteristics they identified were:

- The device is needleless.
- The safety feature is an integral part of the device.
- The device preferably works passively.
- If user activation is required, the safety feature can be activated with single-handed technique and allows the nurse's hands to remain behind the exposed sharp.
- The user can easily tell whether the safety feature is activated.
- The safety feature can not be deactivated and remains protective through disposal.
- The device performs reliably.
- The device is easy to use and practical.
- The device is safe and effective for patient care.

Several evaluation forms were reviewed and 2 were chosen for use in evaluation of devices; one for Phlebotomy devices and one for sharps. We chose the evaluation forms identifying the following safety features:

Safety Sharps Evaluation

- Single Handed Activation.
- Tip of the needle is permanently blunted or covered after activation.
- It is impossible to not use the safety feature.
- Can use the product quickly.
- Easy to handle when wearing gloves.
- The device offers a good view of any aspirated fluid.
- Product will work with all required syringe and needle sizes.
- Audible or visible change apparent when safety device is activated.
- Safety features operate reliably and consistently each time.
- Easy to process after use.
- Easy to learn and understand and does not require expanded training to use.
- Design of product suggests proper use.
- It is almost impossible to skip a crucial step in proper use of the device.
- This device is better alternative to our current product.
- Available from our supplier.

Phlebotomy and Vacutainer Devices Evaluation

- Package is easy to store, easy to open.
- Product is easy to use.
- Product can be used for children and adults.
- The device was satisfactory for patients with fragile veins.
- The device was satisfactory for patients who are heavy.
- Needles come in appropriate sizes (length /gauges).
- The safety feature works reliably.
- The safety feature did not interfere with the blood draw.
- The safety feature could not be bypassed.
- This device did not create any extra risk of sprays, blood leakage and/or drips.
- The devise has the vacutainer attached, or if not is easily attached and stored.
- Overall, the product was satisfactory for standard phlebotomy purposes.
- Available from our supplier.

The Primary SIPT team members chose 1 device from each of the 3 categories of safer medical devices that we had determined would best meet our goal of zero needlestick injuries in this agency. Agency administration, as well as our advisory team members were informed of our choices and gave their approval for the trial of these products to begin on several of our units. Each primary SIPT team member agreed to assist in the identification and evaluation process of the best safer medical devices chosen for this study.

What Lessons Were Learned

1. Having each SIPT member actively assisting in the identification and evaluation process is vital to the success of the study.
2. Keeping Administration abreast of the safety devices chosen for demonstration and evaluation on the units will decrease their fiscal concerns and improve compliance with implementation of the new devices.
3. Focusing on our goal of zero needlesticks encouraged staff to continue with the project.
4. Both nurses new to the agency and existing staff were interested in learning about the newest safer medical devices.
5. That we need a standardized Safer Medical Supply list to ensure that Lead nurses are ordering safer medical devices. Purchasing of these devices will be monitored.
6. The Project Coordinator will order study materials. SIPT team members will assist the lead nurses in completing the Safer Medical supply list for the units.

What We Would Do Differently

1. Have the Primary SIPT members take a more active part in reviewing the evaluation forms submitted for the safer medical devices demonstrated both at our meetings and at new employee orientation classes and Nursing meetings.
2. Appoint the SIPT team members as team leaders on their units giving them ownership in the process and providing assistance to the project coordinator.
3. Evaluate one device at a time.
4. Develop an operational guideline for the product evaluations earlier in the process.

Recommendations:

1. Provide education on Sharps Injury Prevention and the SIPT in all-new orientation and annual infection control classes. Allow staff the ability to demonstrate and evaluate the safer medical devices on the market today and compare to the devices we are currently using.
2. Pick one device that your team feels will best meet your goals for reducing needlestick injuries.
3. Place more responsibility on SIPT members in choosing the Safer Medical Devices to be clinically evaluated at your trial sites.

Time Spent in Identifying and Screening Safer Medical Devices

Several meetings were held to complete this phase of the study and generated more excitement among team members and their peers on each unit involved. We found this phase easier to complete. The estimated time for this phase was 60 hours.

Other, non-labor items:

Item
1. Copies for meetings
2. Food for meetings
3. Safer Medical Devices